

NON-HODGKIN LYMPHOMA

**Table 1: Incidence and mortality summary,
South Dakota, 2003**

	All races combined			White	American Indian
	Total	Male	Female		
Incidence count*	160	88	72	154	6
S.D. incidence ¹ rate ¹	19.3	23.5	15.4	19.5	§
U.S. incidence rate ²	19.4	23.1	16.5	20.4	■
Death count ¹	67	27	40	66	1
S.D. death rate ¹	7.4	7.4	7.7	7.5	§
U.S. death rate ²	3.7	4.6	3.1	3.4	3.7

■ Rate is not available

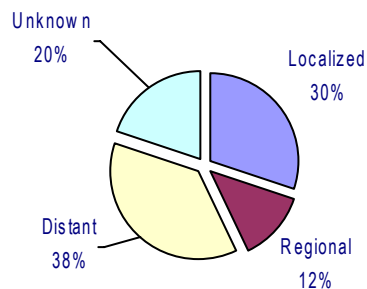
§ Rates less than 16 counts are suppressed because of instability of rates

Rates are per 100,000 persons, age-adjusted to the 2000 U.S. standard population

¹ Source: South Dakota Department of Health

² SEER 13 Registry Data

**Figure 1: Non-Hodgkin lymphoma stage at diagnosis³,
South Dakota 2003**



³ SEER SUMMARY STAGE 2000

Source: South Dakota Department of Health

Descriptive Epidemiology

Lymphomas are malignancies of white blood cells and are typed either Hodgkin or the more common non-Hodgkin lymphoma (NHL). Lymphomas account for 56% of blood cancers. Non-Hodgkin lymphoma represents a diverse group of cancers, with the distinctions between types based on the characteristics of the cancerous cells. The groups are often classified as indolent or aggressive, low, intermediate and high grade. Non-Hodgkin lymphoma is a group of diseases and not just one

type. Each histological grouping is diagnosed and treated differently, and each has prognostic factors that categorize it as more or less favorable.

Incidence: 89% of the lymphomas reported to the SDCR in 2003 were NHL with 74% nodal. It was the sixth leading cancer reported to the SDCR with 160 new cases. There is a steep rise in cases as the population ages. The American Cancer Society estimated 200 new cases of NHL for South Dakota in 2003, therefore NHL might be under reported and the incidence data should be used with caution.

Stage at Diagnosis: Many NHL spread to extranodal sites and are diagnosed at distant stage. The SDCR will try to reduce the 20% diagnosed at unknown stage.

Mortality: NHL was the seventh leading cause of death by cancer with 4% of cancer deaths. Of the 67 deaths which occurred in 2003 in South Dakota, 66 were among whites and 1 was American Indian. Women had 1.5 times the number of deaths compared to men. The five-year trends in death rates from 1999-2003 showed a decrease with a percent change (PC) of -27.4 and an annual percent change (APC) of -10.9 for all South Dakotans with a similar trend for whites. American Indian counts are too low to evaluate trends.

The mortality/incidence ratios were the same 0.4 for all persons, 0.3 males and 0.6 for females.

Years of Potential Life Lost (YPLL₇₅) in 2003: 216 years for whites and 26 years for American Indians.

Average Years of Life Lost (AYLL₇₅) in 2003: 10 years for whites and 26 years for American Indians.

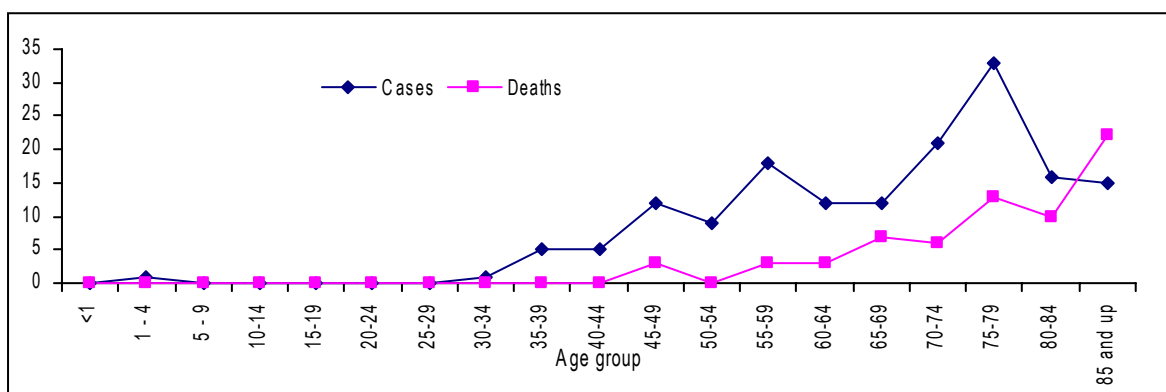
Risk and Associated Factors

There are no known risk factors. Immunosuppressants increase the risk of NHL. HIV and other viruses, exposures to ethylene oxide and other chemicals in solvents, and pesticides or fertilizers are associated risk factors.

Early Detection/Prevention

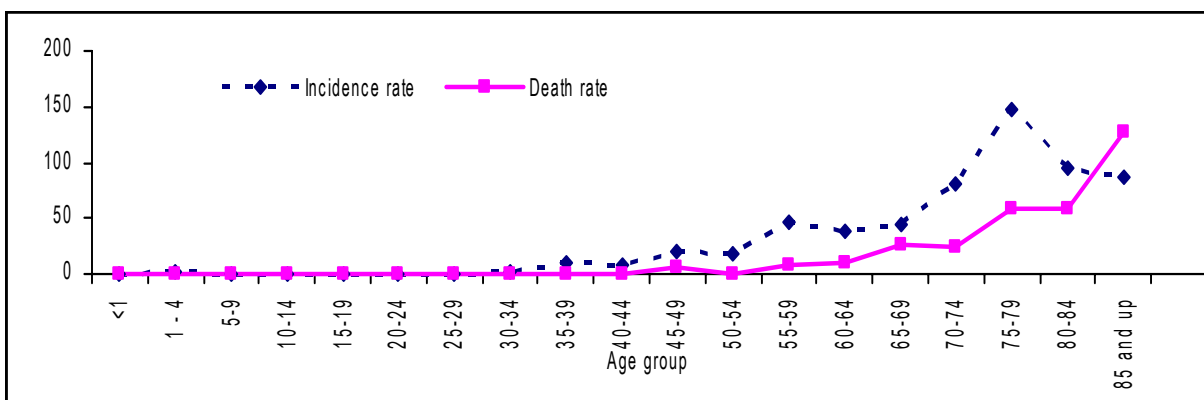
There are no established tests to detect NHL early on a wide scale. It is usually diagnosed after patients present with signs and symptoms referable to lymphadenopathy. This is painless swelling of the lymph nodes, usually in the neck, armpit, and groin or in the abdomen. Other symptoms often include fever, night sweats, excessive tiredness, indigestion and abdominal pain, loss of appetite and bone pain. These symptoms also occur in infections, therefore, it is important to differentiate NHL from infections.

Figure 2 : Non-Hodgkin lymphoma cancer cases and deaths by age, South Dakota 2003



Source: South Dakota Department of Health

Figure 3 : Non-Hodgkin lymphoma cancer age-specific incidence and death rates, South Dakota 2003



Rates are per 100,000 persons

Source: South Dakota Department of Health

Table 3 : Non-Hodgkin lymphoma age-adjusted incidence , 2001-2003 and age-adjusted death rates, 1999-2003, South Dakota and United States

		All races combined			White	American Indian/PI
		Total	Male	Female		
<u>2001-2003</u>	SD incidence count	473	248	225	441	21
3 years	S.D. incidence rate ¹	19.0	22.5	16.1	18.4	21.8
incidence ¹	U.S. SEER incidence rate ²	19.0	24.1	16.0	20.4	11.5
<u>1999-2003</u>	SD death count	382	195	187	375	6
5 years	S.D. death rate ²	8.8	10.9	7.3	9.0	§
deaths ¹	U.S. SEER death rate ²	7.9	9.9	6.4	8.6	4.3

Note: § Rates based on < 16 counts are suppressed because of instability of rates

Rates are per 100,000 persons, age-adjusted to the 2000 U.S. standard population

Source: ¹ South Dakota Department of Health ²SEER Cancer Statistics Review 1975-2003